

**PROCESS AND APPARATUS FOR PREPARING
HETEROGENEOUS CATALYSTS**

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HETEROGENEOUS CATALYSTS**

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Abstract

The invention relates to a process and to an apparatus for preparing a heterogeneous catalyst having at least one catalytically active species bound to the surface of a support material. According to the process, the surface of the support (6) is first pretreated. A catalyst reagent containing the catalytically active species or its precursor is vaporised and the vapour is routed into a reaction chamber (6) where it is brought to interact with the support material. The catalyst reagent not bound to the support is withdrawn from the reaction chamber (4) in gaseous form. If necessary, the species bound to the support is post-treated in order to convert it into a catalytically active form. According to the invention, the amount of catalyst reagent brought into the reaction chamber is at least equal to, preferably in excess of the number of available binding sites on the surface (6). The temperature of the support is kept higher than the condensation temperature of the vapour and at the same time at a sufficiently high level to attain the thermal activation energy needed for forming bonds between the active species and the support. By binding the catalytically active species in this way to the support, it is possible to provide a heterogeneous catalyst having a high activity even at small amounts of the active species.